



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 8, 1995

Mr. Phillip Palmer
Diamond K Company
234 North 500 West
Richfield, Utah 84701

Re: Plan Review, Diamond K Company, DKG Quarry (B&J Placer Claims), M/015/041
(UTU-69860), Emery County, Utah

Dear Mr. Palmer:

The Division has reviewed the additional information received January 10, 1995, for your DKG Quarry Operations (B&J Placer Claims). The information was submitted by John Welsh and was copied to the BLM San Rafael Resource Area. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. *Please format your response in a similar fashion.* Comments in italicized print are taken from the Division's December 19, 1994 review letter.

106.5 Existing soil types, location, amount:

The operator needs to submit results of a soil analysis which includes at a minimum: Texture, pH, Ec, CEC, Total N, Available Phosphorus (as P_2O_5), Potassium (as K_2O), and Acid/Base potential. This analysis needs to be conducted on both the 4 inches of topsoil and the 8 inches of subsoil.

One soil analysis was submitted which did not include Ec, CEC or Total N. There is no indication as to whether sampled material is the 4 inches of topsoil or the 8 inches of subsoil. Please submit the analysis as originally requested. (LMK)

106.6 Plan for protecting & redepositing soils:

Under the "SOIL FORMATION:" section of your response, you state, "...if it were so decided that reclamation of the South Salt Wash Drainage was desirable, then all of the reclaimed gypsiferous "top soil" should be designed to flush into South Salt Wash Drainage."

Please note, the goal of reclamation is to **prevent** loss of soil resources by accelerated erosion. Soil materials are to be replaced (respread) in such a manner as to minimize erosion and sediment contribution to the natural drainages. Other portions of your submittal indicate that the final surface will be configured by terracing and contour furrowing, with depressions of all varieties so as to retain moisture. With the exception of terracing (See BLM comments) this is appropriate.

Based on the limited soils data submitted and past experience with similar soils, the Division has recommended a fertilizer application for reclamation. This needs to be incorporated into your plan. (LMK)

106.7 Existing vegetation - species and amount:

This section has been adequately addressed. (LMK)

106.8 Depth to groundwater, extent of overburden, geology:

On page 5, Form MR-LMO, Section III, item 4, the applicant lists the depth to groundwater as 6655-6600 feet. Upon closer examination of a USGS topographic map of the area, the Division notes that this appears to represent the surface elevation of the mine area. If this is also the elevation of the local groundwater table please confirm. If not, please provide an estimate of the depth to the local and/or regional aquifer in the vicinity of the mine site. Please provide information to justify/substantiate your depth estimate as well. (DWH)

The reviewer could find no answer to this question in the operator's January 6, 1995 response. Please provide the requested information. (DWH)

109.4 Slope stability, erosion control, air quality, safety

The Division recommends that all slopes be left at an angle close to their original state of 3h:1v at final reclamation. Has Diamond K received permits or exemptions from permitting requirements from the Utah Department of Environmental Quality, Divisions of Water Quality and Air Quality? (AAG)

The January 10, 1995, response from DKG did not address this comment. Have permits or exemptions been obtained from the Division of Air Quality and the Division of Water Quality? (AAG)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes drainages, pits, etc. reclaimed

From correspondence and the Plan of Operations submitted to the BLM, and the MR-LMO form submitted to the Division, we offer the following interpretation of the reclamation plan for this site.

No oil, lubricants, or toxic substances will be drained onto the ground. All trash at the site will be removed to an authorized dump or landfill. All disturbed areas are to be recontoured to leave an undulating surface. The Division prefers all slopes to be returned to their approximately original contour or no steeper than 3:1. The recontoured area will be furrowed along the contour to leave a rough surface. Salvaged topsoil will be replaced on the recontoured areas. Salvaged cryptogamic soils will be placed on the replaced topsoil. Some reject fines may be placed in the pits as backfill. The disturbed area will be seeded using a seed mix approved by the BLM (DOGM concurrence is requested). The reclaimed areas may be fenced if necessary, to prevent damage by cattle grazing. The Division will require that any drainages impacted by this operation be left in a stable condition.

*Please confirm or clarify this interpretation of the reclamation planned for this site.
(AAG)*

This section was not responded to in the January 10, 1995 DKG response. Please indicate your agreement/disagreement with this summary description of the reclamation plan. (AAG)

110.5 Revegetation planting program:

It is our understanding that the operator is in the process of having the revegetation seed mix revised by the University of Utah. Before a new seed mix is used, it must be approved by the Division and the BLM.

The University of Utah may not be aware of the Division's or the BLM's requirements and standards for revegetation. The submitted seed mix is not acceptable. After reviewing the vegetation information submitted, and from past reclamation experience in similar environments, the Division has prepared a recommended seed mix (with BLM concurrence) that should be appropriate for your site. If the attached seed mix is acceptable to you, please make it part of your reclamation plan. Otherwise, please propose an alternate seed mix for Division and BLM approval. (LMK)

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R647-4-113 - Surety

The January 10, 1995, DKG response referred to a reclamation bond for approximately 12 acres in Area A being set at \$2,000 per acre. This seems to refer to the BLM's bonding threshold for mining disturbances which do not involve cyanide. The Division does not have such a limit on bonding. Our reclamation estimate attached to the December 19, 1994 letter, estimated reclamation costs at the DKG site to be \$29,400 in terms of 1999 dollars. It should be noted that the BLM's bonding does not include escalation, while our estimate includes five years of escalation as required by the Board of Oil, Gas and Mining. The Division will require that a surety in the amount of \$29,400 be posted for this operation.

The Division is aware of DKG's \$10,000 bond posted with Emery County for reclamation of surface disturbances as required by their zoning ordinances. Mr. Bryant Anderson has indicated Emery County would recognize a surety posted with the Division for reclamation of the DKG mine site in lieu of the \$10,000 bond, provided the Division contacts the County prior to releasing the surety. This would allow DKG to post one surety with the Division which would satisfy the requirements of all three regulatory entities (Division, BLM and Emery County).

The Division will suspend further review of the DKG Quarry (B&J Placer Claims) NOI until your response to this letter is received. If you have any questions in this regard please contact me, Tony Gallegos, or Lynn Kunzler of the Minerals Staff. If you wish to arrange a meeting to discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,



D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb

Attachment: Recommended Revegetation Species List
cc: Neil Simmons, BLM San Rafael RA
M15-41.RVW

Recommended Revegetation Species List
for

Diamond K Company
DKG Quarry (B & J Placer Claims)
M/015/041

<u>Common Name</u>	<u>Species Name</u>	<u>*Rate lbs/ac (PLS)</u>
Galleta grass	<u>Hilaria jamesii</u>	1.0
Indian ricegrass	<u>Oryzopsis hymenoides</u>	2.0
Needle & thread grass	<u>Stipa Comata</u>	1.0
Yellow Sweetclover	<u>Melilotus officinalis</u>	0.5
Scarlet globemallow	<u>Sphaeralcea coccinea</u>	0.5
4-wing saltbush	<u>Atriplex canescens</u>	1.0
Shadscale	<u>Atriplex confertifolia</u>	1.0
Rubber Rabbitbrush	<u>Chrysothamnus nauseosus</u>	0.5
Winterfat	<u>Eurotia lanata</u>	1.0
Forage Kochia	<u>Kochia prostrata</u>	0.5
Total Seed		9.0 lbs/ac

Fertilizer recommendations:

Ammonium nitrate (33-0-0)	50 pounds/acre
Diammonium phosphate (18-46-0)	50 pounds/acre

* This seed/fertilizer recommendation was discussed with Mr. Neil Simmons of the BLM.
The BLM will accept these recommendations.

Prepared by DOGM January 18, 1995

M015/041.sdm